

INDEX  
TESTIMONY OF  
SYDNEY BERWAGER, STEPHEN OLIVER, AND HARRY CLARK

Witnesses for Bonneville Power Administration

**SUBJECT:   Service Proposal For Direct Service Industrial Customers**

	<b>Page</b>
Section 1.   Introduction and Purpose of Testimony .....	1
Section 2.   Proposal Description and Rationale .....	1

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5 **SUBJECT: SERVICE PROPOSAL FOR DIRECT SERVICE INDUSTRIAL**  
6 **CUSTOMERS**

7 **Section 1. Introduction and Purpose of Testimony**

8 *Q. Please state your names and qualifications.*

9 A. My name is Sydney Berwager. My qualifications are contained in WP-02-Q-BPA-03.

10 A. My name is Stephen Oliver. My qualifications are contained in WP-02-Q-BPA-54.

11 A. My name is Harry Clark. My qualifications are contained in WP-02-Q-BPA-12.

12 A. My name is Stanley Kusaka. My qualifications are contained in WP-02-Q-BPA-39.

13 *Q. What is the purpose of your testimony?*

14 A. The purpose of this testimony is to summarize BPA's initial proposal for service to  
15 BPA's direct service industrial (DSI) customers, and to describe the policy decisions  
16 underlying the proposal.

17 *Q. How is your testimony organized?*

18 A. Section 1 is this introduction. The remainder of the testimony describes the service and  
19 the pricing being proposed for sales to the DSIs, and explains the rationale for the  
20 proposal, including an analysis of the proposal's effects on continued DSI operations in  
21 the region and the basis for differentiating prices among the DSI customers.

22 **Section 2. Proposal Description and Rationale**

23 *Q. Please describe BPA's proposal for service to the DSIs during the FY 2002-2006 rate*  
24 *period.*

25 A. BPA has developed what is called the "Compromise Approach" for service to the DSIs.  
26 Under this approach, BPA is proposing to offer the DSIs up to 1440 aMW in the form of

1 a firm power block product. This power will be allocated among the DSIs based on the  
2 each DSIs' purchases under the current Industrial Firm Power (IP-96) rate, and will be  
3 sold under IP Targeted Adjustment Charge (IPTAC) rates. For some of these DSIs, BPA  
4 is proposing an IPTAC rate of 23.5 mills/kWh for a flat block of power that is about  
5 75 percent of what they are currently buying. BPA expects to sell 1,210 aMW to these  
6 customers. For other DSIs that are currently buying power under the IP-96 rate, BPA is  
7 proposing an IPTAC rate of 25.0 mills/kWh for a flat block of power that is about  
8 60 percent of what they are currently buying. Under the proposal, these customers would  
9 be eligible to purchase up to 230 aMW, but there is some uncertainty regarding how  
10 much of this amount will be purchased. These prices (23.5 and 25.0 mills/kWh) do not  
11 include load following services, transmission, or ancillary services.

12 Sales to the DSIs will be eligible for the Conservation and Renewables (C&R)  
13 Discount (\$0.50/MWh), subject to the same standards and procedures as utilities eligible  
14 for the C&R Discount. *See* Esvelt, *et al.*, WP-02-E-BPA-33.

15 *Q. Are there other elements to the proposal?*

16 A. Yes. BPA is also proposing a cost-based indexed IP rate for the aluminum companies  
17 with smelting operations. This indexed rate is akin to the variable industrial power rates  
18 that BPA has made available to the DSIs in the past. The proposed indexed rate is tied to  
19 the price of aluminum, thereby allowing the price of power sold to the DSI to follow the  
20 price of aluminum, within certain limits.

21 *Q. Please explain generally the cost-based indexed IP rate and how it will work.*

22 A. The cost-based indexed IP rate provides a predetermined contractual tie between the price  
23 of BPA's power and the market price of aluminum. Establishing a tie between input  
24 price (electricity) and output price (aluminum) will enhance the ability of aluminum  
25 producers to operate over an entire aluminum market cycle. With this type of rate, when  
26 the price of aluminum decreases or increases, so will the price of power, within certain

limits. Decreasing the price of power when aluminum prices are low reduces the operating costs at the smelters and should encourage higher production levels than would otherwise be possible under adverse conditions in the aluminum market. Increasing the price of power when aluminum prices are high is intended to compensate BPA for the decrease in revenues, if and when the lower rates are in effect.

The indexed rate is designed with an average rate of 23.5 mills/kWh for DSIs that supported the Compromise Approach and 25 mills/kWh for those that did not. Under the aluminum price forecast adopted for the initial proposal design of this rate, these prices would be applicable when aluminum prices are at 68 cents/lb (London Metals Exchange three-month aluminum contract). As aluminum prices decrease, the rates will decrease until they reach the lower rate limits of 19 mills/kWh (for the 23.5 mills/kWh IPTAC rate) and 20.5 mills/kWh (for the 25.0 mills/kWh IPTAC rate). The pivot point at which the lower rate limit is reached will be set at 6 cents/lb below the aluminum forecast developed in the rate case. As aluminum prices rise, the rate will increase up to an upper rate limit of 28.5 mills/kWh (for the 23.5 mills/kWh IPTAC rate) and 30 mills/kWh (for the 25.0 mills/kWh IPTAC rate). The pivot point at which the upper rate limits are reached will be set at 6 cents/lb above the aluminum price forecast developed in the rate case. Details of the indexed rate are in the testimony of Miller, *et al.*, WP-02-E-BPA-21.

*Q. Will the Administrator have the option of adopting different parameters for the cost-based indexed IP rate in the final Record of Decision?*

*A.* Yes. The Compromise Approach is BPA's initial proposal in this rate proceeding, not a final decision. The Administrator will make a final decision, based on the record created during the rate case, on all relevant issues, including those associated with the Compromise Approach for DSI service. Therefore, the final design of the indexed rate for DSI service may differ from the Compromise Approach described in the initial proposal.

1 *Q. Does the cost-based indexed IP rate create a risk that BPA will not fully recover the costs*  
2 *associated with service to the DSIs?*

3 A. The rate was designed to collect revenues equivalent to the IPTAC rates of  
4 23.5 mills/kWh and 25.0 mills/kWh over the five-year period, assuming a random  
5 distribution of aluminum prices around the IPTAC rates.

6 Placing the aluminum price pivot points 6 cents per pound higher and lower than  
7 the aluminum price forecast is one feature that helps reduce DSI revenue volatility. If the  
8 pivot points were set closer to the aluminum price forecast, that would create greater  
9 volatility because the indexed price would reach the upper and lower rate limits with  
10 narrower swings in aluminum prices. Similarly, the upper rate limits and lower rate  
11 limits are set consistent with achieving a high probability of recovering the same level of  
12 revenues that would be recovered under the IPTAC rates. A wider spread between the  
13 lower and upper rate limits would also create an unacceptable level of volatility in  
14 revenues. Forecasted revenues under this cost-based indexed IP rate will be equivalent to  
15 or greater than \$23.50 (\$23.00 with the C&R Discount) over the FY 2002-2006 rate  
16 period. At the time a DSI signs its new power sales contract, it will have to choose  
17 whether to take service under the cost-based indexed IP rate design or under the  
18 applicable IPTAC rate. Each aluminum company's choice will apply to all of its  
19 smelting operations for the entire term of the contract.

20 *Q. Will contracts with the DSIs be take-or-pay?*

21 A. Yes. These contracts will be take-or-pay arrangements. If a DSI reduces load to the  
22 extent that it cannot accept deliveries of the amount of power it is obligated to purchase,  
23 BPA will remarket the power for the DSI. The DSI will continue to pay for the  
24 contracted amount of power, but BPA will provide a credit to the DSI for the amount of  
25 energy remarketed minus any remarketing fee. The amount of this credit will be capped  
26 at the rate paid under this contract.

1 BPA is proposing to make only one exception to this take-or-pay obligation.  
2 DSIs that, at the time they sign a contract, elect to take service under the cost-based  
3 indexed IP rate, can simultaneously elect a take-or-pay waiver option. For any DSI  
4 making this dual election, if the company reduces load at the time aluminum prices are  
5 such that the electric price is at the lower rate limit, the DSI's take-or-pay obligation on  
6 BPA will be reduced and BPA's obligation to serve that amount of load for the remainder  
7 of the contract will be reduced by an equivalent amount. The amount of power subject to  
8 stranded cost or cost underrecovery charges will not be reduced by the amount of this  
9 take-or-pay reduction.

10 Sales under this arrangement will be subject to the power Cost Recovery  
11 Adjustment Clause (CRAC). The CRAC will be added to the cost-based indexed IP rate  
12 or the standard IPTAC rate, whichever is used by the DSI. With regard to other stranded  
13 cost or cost under-recovery mechanisms, the power sales contract will be explicit that the  
14 new contract supercedes existing contracts and the DSI will be subject to the same  
15 exposure as BPA's utility customers purchasing Subscription power. Sales under this  
16 Compromise Approach arrangement would be eligible for a share of any CRAC  
17 "dividend" adopted by BPA in the same way that Subscription sales to other customers  
18 would make those customers eligible for a share of any such dividend.

19 *Q. Does the initial rate case proposal differ from BPA's proposal for service to the DSIs*  
20 *described in the Subscription Strategy?*

21 *A.* Yes. The Subscription Strategy committed no specific amount of service to the DSIs. It  
22 stated that BPA's expectation was to serve all DSI loads that individual companies asked  
23 BPA to meet. At the time the Subscription Strategy was developed, BPA expected to  
24 have sufficient inventory to meet DSI loads even after meeting other customer's  
25 Subscription requests with higher priority than DSI requests. Such an outcome now  
26 seems improbable given the high level of load projected to be placed on BPA by other

1 customers. *See Burns, et al.*, WP-02-E-BPA-08. The initial proposal tries to make  
2 enough power available to serve approximately half of the existing DSI plant load, or  
3 approximately 75 percent of current DSI load on BPA. The Subscription Strategy also  
4 expected that DSI service would be provided at an IP rate that was approximately equal  
5 to the Priority Firm Power (PF) rate. However, in order to make more power available to  
6 DSIs without raising other customers' rates, the proposed IPTAC rates must raise the cost  
7 of power in this proposal above the PF rate while still at prices well below the projected  
8 market prices for power.

9 *Q. Why is BPA changing its proposal for service to the DSIs?*

10 A. Since BPA published the Subscription Strategy in December 1998, electricity market  
11 price projections generally have increased for the FY 2002-2006 rate period. This has the  
12 effect of making it less likely that sufficient power would be available for DSI service  
13 after the other customers' Subscription requests had been satisfied. Other customers are  
14 likely to want more BPA power as protection against these rising market prices.

15 Another effect of expected higher market prices for electricity is to make it more  
16 difficult for DSI operations to continue in the Northwest if the DSIs are required to  
17 purchase all or most of their power at these higher market prices. The availability of  
18 low-cost Federal power was what attracted most of the DSIs to the region many years  
19 ago. The DSIs have asserted that if no Federal power is offered at prices below  
20 anticipated market rates, a significant number of family wage aluminum smelter jobs in  
21 the region will be at risk. BPA's analysis, discussed later in this testimony, confirms that  
22 these assertions are credible. The jobs in jeopardy are important to the region and,  
23 especially, to the communities in which these plants are located. Service to these  
24 customers is consistent with BPA's mission to spread widely throughout the region the  
25 benefits of Federal powers. The fact that Pacific Northwest aluminum production  
26

1 comprises about 40 percent of the nation's production of this valuable metal is also a  
2 consideration that must be taken into account.

3 Continued service to the DSI customers also means more load will be subject to  
4 BPA's stranded cost-recovery mechanisms, including CRAC, giving BPA more  
5 confidence that it can handle adverse financial conditions.

6 *Q. How much augmentation must BPA do in order to implement the Compromise Approach*  
7 *and how will BPA pay for the augmentation necessary to implement this proposal for DSI*  
8 *service if it does not raise the base rates of other customers?*

9 A. BPA will be purchasing approximately 1,562 aMW in order to have sufficient Federal  
10 Base System (FBS) resources to meet BPA's total Subscription load obligation during the  
11 FY 2002-2006 period. BPA, however, does not plan FBS replacement purchases on a  
12 customer class-by-customer class basis. Nevertheless, BPA will be treating 450 aMW of  
13 additional purchases for DSI service as being made specifically in order to provide the  
14 proposed service to the DSIs and the costs of those purchases will be allocated directly to  
15 the DSIs. BPA's analysis regarding these purchase power costs is described in the  
16 Five-Year Flat Block Price Forecast testimony of Oliver, *et al.*, WP-02-E-BPA-20.

17 *Q. Is there a risk that BPA may have purchase power costs associated with the DSI proposal*  
18 *that are higher than it is projecting, and if so, how is that risk accounted for?*

19 A. Purchase power costs could be somewhat higher or lower than those being projected, but  
20 BPA believes that the differences are unlikely to be very great. For more details on  
21 BPA's expected costs for augmenting the system as necessary to serve loads in the  
22 region, *see* Oliver, *et al.*, WP-02-E-BPA-20.

23 *Q. How will the amount of power dedicated to this proposal be allocated among the DSIs?*

24 A. The total amount of power will be allocated according to the relative amounts of IP-96  
25 purchases of each eligible DSI. In other words, those DSIs that purchased larger amounts  
26 of power from BPA during the current rate period will be entitled to a larger proportional

1 share of the available power than DSIs that placed less load at the IP-96 rate on BPA  
2 during this period. Further, only those DSIs that were willing to support the Compromise  
3 Approach proposal in the rate case and in other forums will be eligible to purchase from  
4 the 1,210 aMW block, which is proposed to be offered at the lower rate of  
5 23.5 mills/kWh. The remaining 230 aMW at the higher rate of 25.0 mills/kWh will be  
6 available to DSIs that were unwilling to commit to supporting the Compromise Approach  
7 as BPA's initial proposal.

8 *Q. Why is the available power being allocated according to IP purchases made during the*  
9 *current rate period (FY 1997-2001)?*

10 *A.* In 1995 and 1996, when the current DSI contracts were being negotiated and the DSIs  
11 were deciding how much power to purchase from BPA at the IP-96 rate, market offers for  
12 much of the current period were at or below the IP-96 rate. Some believed that BPA  
13 would not be able to lower its costs sufficiently to make a successful transition to  
14 deregulated energy markets. Today, BPA is succeeding in making that transition. Part of  
15 BPA's ability to do so was created by the DSIs chose, in 1995 and 1996, to make  
16 purchases at the IP-96 rate from BPA during this period. Some purchased more than  
17 others, even though they could have obtained better prices in the short-term, they were  
18 willing to make an investment in the long-term success of BPA and the perceived future  
19 value of the Federal Columbia River Power System. Given BPA's limited ability to  
20 provide the DSI customer class with an amount of power at below market prices, it seems  
21 fair to offer a level of service to these customers proportionate with their past  
22 commitment to BPA's continuing ability to bring long-term benefits to the region.

23 *Q. How are the IP Targeted Adjustment Charges derived?*

24 *A.* Power will be sold to the DSIs at a price that reflects a melding of power sold from the  
25 FBS and power purchased specifically to serve the DSIs. Of the 1440 aMW amount,  
26 990 aMW will be priced using a cost-based approach consistent with the IP-PF

1 relationship of section 7(c)(2) of the Northwest Power Act. *See Doubleday, et al.,*  
2 WP-02-E-BPA-18. The cost basis for the 990 aMW component of DSI service could  
3 change, up or down, as BPA's overall costs change. The remaining 450 aMW will be  
4 melded in at a price that reflects the costs and risks of this amount of energy purchased  
5 on behalf of the DSIs. It is this melding that will produce the IP Targeted Adjustment  
6 Charges that will be the basis of all Subscription offers to the DSIs.

7 *Q. Does this mean that the IPTAC rates could be higher or lower than 23.5 or*  
8 *25 mills/kWh?*

9 *A.* Yes, if the price of the 990 aMW changes as BPA applies section 7(c)(2) of the  
10 Northwest Power Act, or if the costs associated with purchasing the 450 aMW change  
11 from projected amounts.

12 *Q. Could a DSI buy only its "allocation" of the 990 aMW at a price derived from the cost-*  
13 *based approach of section 7(c)(2) and without the need to include a TAC?*

14 *A.* No. BPA has designed a DSI service package reflecting both a price and a quantity  
15 which are inextricably linked. The amount of service is important. It allows a DSI to  
16 buy up to approximately 75 percent of its current IP purchases. The price is also  
17 important. Purchases can be made at a rate significantly below market. BPA believes  
18 that this amount and price combination offers more than the sum total of its individual  
19 parts and will substantially assist in the DSIs' ability to continue to operate in the Pacific  
20 Northwest. Severing the two would degrade the value of the service package  
21 considerably. For example, a share of 990 aMW would represent substantially less than  
22 half of each DSI's potential load in the region. This smaller amount might encourage the  
23 use of reduced production schedules to manage energy costs. Such a result would be  
24 inconsistent with BPA's focus on helping to maintain as many DSI jobs in the region as  
25 possible, consistent with its other marketing and ratemaking goals. In addition, other  
26 customers will be absorbing some costs and risks as a result of this service to the DSIs.

1 Therefore, in order to provide additional risk protection to BPA and these other  
2 customers, the entire amount will be subject to CRAC.

3 *Q. Why is BPA's proposal for DSI service structured to recover revenues from the DSIs*  
4 *equal to 23.5 mills/kWh on average over the rate period as opposed to a higher or lower*  
5 *number?*

6 A. A price of 23.5 mills/kWh was selected because it is substantially below the expected  
7 market of 26 to 30 mills/kWh. *See* Oliver, *et al.*, WP-02-E-BPA-20. It is a price level  
8 that provides a substantial likelihood that DSIs will be able to remain in operation  
9 throughout the rate period. While BPA cannot, of course, assure that all the plants will  
10 continue to operate, in fact, even today not all the plants are operating at their full  
11 capacity, BPA believes that the availability of power at the lower rate will help keep the  
12 majority of DSI jobs in the region. This price also requires the DSIs to bear an equitable  
13 share of the cost of providing an enhanced level of service. In this way, BPA can protect  
14 other customer classes against an increase in rates above current levels. The price also  
15 reflects a modest but reasonable increase in the cost of service when compared to the  
16 price of equivalent service under the existing rate schedule. The IP-96 rate for equivalent  
17 service is 20.26 mills/kWh. A rate of 23.5 mills/kWh would represent a 16 percent  
18 increase over five years. If the DSIs qualify for the C&R Discount, their effective rate  
19 would be 23.0 mills/kWh, a 13.5 percent increase. This compares reasonably to a  
20 projected increase in the consumer price index of 12 percent over the same five-year  
21 period. This comparison does not take into account the fact that the IP-96 rate includes a  
22 credit for operating and stability reserves that the DSIs provided BPA through the  
23 interruption rights in their current standard contracts.

24 *Q. Is BPA guaranteeing the survivability of each DSI on a plant-by-plant basis?*

25 A. No. BPA cannot guarantee the survivability of any DSI nor does BPA have the  
26 information necessary to understand the full details of each plant's operations and each

1 company's investment plans. What BPA can do is put together a package that allows the  
2 DSIs to fill a substantial portion of their energy needs at prices that are significantly  
3 below market without creating significant impacts on other customer classes. For the  
4 DSIs, this will help to offset the present conditions in the aluminum market. Whether  
5 that alone will be sufficient to ensure survivability is not a consideration in this rate case.  
6 BPA's interest is in doing as much as it can to preserve jobs in the region while  
7 maintaining its other strategic goals and commitments. BPA believes this service  
8 proposal is good policy and good business. The DSIs are in a better position to judge  
9 what other kinds of steps they may need to take in order to ensure the survivability of  
10 their plants.

11 *Q. Have you analyzed the aluminum industry in the Pacific Northwest to determine what*  
12 *effect power prices would have on the continuation of their operations under different*  
13 *aluminum market conditions?*

14 *A. Yes, we have conducted some general analysis.*

15 *Q. What market assumptions did you make, and what scenarios did you study?*

16 *A. We developed scenarios with power market rates during FY 2002-2006 that averaged 26,*  
17 *28, and 30 mills/kWh and combined them with aluminum price scenarios of 60, 65, 70,*  
18 *75, and 80 cents per pound. We then analyzed likely smelter operations under these*  
19 *conditions, with BPA supplying half of the smelter's power at BPA rates in 1-mill*  
20 *increments from 18 mills to the market rate.*

21 *Q. Do the power prices used in your analysis include transmission costs?*

22 *A. This rate case will set rates for power sold by BPA's Power Business Line. All power*  
23 *rates have been based on the raw cost of power and transmission costs have generally*  
24 *been excluded. However, our analysis in this instance added 1.5 mills/kWh for*  
25 *transmission costs (this is slightly higher than existing network transmission rates for*  
26 *network service). That is, in this testimony, we might describe a scenario where BPA*

1 supplied half the smelter with power at 25 mills/kWh, and the smelter bought the other  
2 half of its power needs on the power market at 28 mills/kWh. The 1.5 mills has been  
3 added to both of these numbers, so the scenario analysis actually assumes half of the  
4 power delivered at 26.5 mills/kWh and the other half delivered at 29.5 mills/kWh. The  
5 analysis would have been incomplete had we not included some assessment of the  
6 transmission costs, which constitute an unavoidable component of a smelter's overall  
7 power costs, unless the company builds generation on-site.

8 *Q. What did you conclude from your analysis?*

9 A. Of all the aluminum price scenarios examined, the likelihood that smelter operations  
10 would continue was most sensitive to energy prices when aluminum prices were in the  
11 65 to 70 cents range under all power market price scenarios (26, 28 and 30 mills/kWh).  
12 In other words, a moderately sensitive market case scenario was one where the aluminum  
13 prices are between 65 cents and 70 cents, and the market price of power averages  
14 28 mills/kWh. A severely sensitive market case scenario was one where the aluminum  
15 prices are below 65 cents and the power market prices averages 30 mills/kWh. While the  
16 price of BPA power would affect the ability of the smelters to continue to operate in other  
17 scenarios, the most pronounced effects would occur during moderately and severely  
18 sensitive scenarios.

19 *Q. What did you find out about power rates needed under the "moderate" market scenario?*

20 A. Under the 65 cents scenario, if BPA did not offer the smelters any power (that is, the  
21 smelter bought all its power on the market at 28 mills/kWh), then 84 percent of the  
22 smelter loads are at risk of not operating. At this aluminum price, there is an  
23 improvement of 10 percent, from 84 percent to a 74 percent risk of smelter loads not  
24 operating, if BPA supplies half the smelters' power at 25 mills.

25 Under the 70 cents scenario, if the smelters bought all their power on the market  
26 at 28 mills/kWh, then 36 percent of the smelter loads are at risk of not operating. There

1 is a significant improvement if BPA supplies half the smelter's power at 25 mills, when  
2 smelter survivability improves by 16 percent, from a 36 percent to a 20 percent risk of  
3 loads not operating.

4 Under a 68 cents scenario, the aluminum price that BPA is using to design the  
5 indexed rate proposal, the effect of BPA supplying half the load has a very significant  
6 impact. For example, if the smelters had to buy all their power at 28 mills/kWh,  
7 68 percent of the smelter loads are at risk of not operating. At this combination of  
8 aluminum and electricity market prices, however, the amount of smelter load at risk  
9 drops by almost one-half (to 36 percent) if BPA supplies half the smelter's power at  
10 25 mills/kWh. It drops by over two-thirds (to 22 percent) if BPA supplies half the load at  
11 23 mills/kWh.

12 *Q. What did you find out about power rates needed under the "severe" market scenario?*

13 *A.* Under a 60 cents aluminum price scenario, smelter operations change very little no matter  
14 what the BPA power rate or market power rate. The aluminum price at 60 cents is too low  
15 for most smelters to operate over the long-run, so most smelters are not sensitive to any  
16 reasonable changes in cost-based power rates. For example, at that aluminum price, if the  
17 market price of electricity was 28 mills/kWh, even if BPA offered power for half the load  
18 at a price of 18 mills, 84 percent of the aluminum operations would remain at risk.

19 Under the 65 cents aluminum and 30 mills/kWh electricity price scenario, then  
20 84 percent of the smelter loads were at risk of not operating. At this combination of low  
21 aluminum and high market energy prices, a measurable decrease in the amount of  
22 production at risk does not occur until the price of BPA's supply of half the load drops to  
23 23 mills/kWh, when the amount of smelter load at risk drops by 10 percent, from  
24 84 percent to 74 percent. A significant increase would not occur until BPA supplied half  
25 the load at a price of 19 mills/kWh, when the amount of load at risk would drop to  
26 approximately 50 percent.

1 Q. Will the proposed indexed rate promote continued DSI smelter operations under these  
2 severe scenarios?

3 A. Yes. These are the types of aluminum prices where the value of the proposed indexed  
4 rate to the smelters, by giving them a tool with which to deal with temporary price drops,  
5 is most apparent. As previously noted, if half the smelters' power needs are being met at  
6 19 mills/kWh (the lower rate limit of the proposed indexed rate), the amount of smelter  
7 load at risk drops to roughly 50 percent. While the indexed rate can thus help the  
8 smelters deal with temporary drops in aluminum prices, BPA could not cover its costs if  
9 it collected only 19 mills/kWh over the life of the contract. Thus, we are not offering a  
10 19 mills/kWh lower rate limit with the expectation that it would be our average price over  
11 the period. But that lower price would apply for as long as aluminum prices remained at  
12 those lower levels during the contract period. See Miller, *et al.*, WP-02-E-BPA-21. The  
13 indexed rate is intended to complement the lower-than-market IPTAC, which in turn  
14 represents the basic value that BPA is offering the aluminum plants in its attempt to help  
15 them continue operations in the region.

16 Thus, under a reasonable "severe" market case scenario (aluminum prices at  
17 65 cents and market power at 30 mills/kWh), BPA supplying half the smelters' power  
18 needs at average prices down to 23 mills/kWh would create a measurable improvement in  
19 smelter viability. The indexed rate can offer additional protection for the DSIs to deal  
20 with this type of scenario at the cost of providing more revenues to BPA when market  
21 prices exceed the 68 cents forecast used for development of the indexed rate.

22 At 30 percent of operating costs, power is the largest component of smelter  
23 production costs. However, reductions in power costs alone cannot guarantee a smelter's  
24 survival. But, when a smelter has a reasonable expectation that its largest power costs are  
25 manageable, it should be easier to focus on other steps that may be needed in order to  
26 avoid the curtailment or shutdown of operations.

1 *Q. Why do customers that did not commit to supporting the proposal pay a higher IPTAC*  
2 *rate of 25 mills/kWh?*

3 A. As stated earlier, the Subscription Strategy, published in December 1998, made no  
4 commitment of a specific amount of power to the DSIs. Over time, as forecasts of  
5 market prices for electricity in the FY 2002-2006 period increased, there were increasing  
6 doubts as to whether there would be power left for the DSIs after other customers  
7 exercised their options under Subscription. Because of this, BPA began discussions with  
8 DSIs and others regarding some level of enhanced service commitment to the DSIs. By  
9 early May 1999, BPA had concluded that by using approximately \$25 million per year  
10 already budgeted for system augmentation for the FY 2002-2006 period, it could offer  
11 DSIs approximately 1,200 aMW of service at an IPTAC rate (for flat, undelivered  
12 energy) of 25 mills/kWh. Under this arrangement, called the Targeted Augmentation  
13 Approach, BPA would use the \$25 million augmentation budget to combine 500 aMW of  
14 21 mills/kWh power with 700 aMW of market-priced power in order to provide  
15 1,200 aMW at a melded price of 25 mills/kWh. Because that service would utilize  
16 augmentation funds already budgeted, BPA was confident it could do so with almost no  
17 impact on the rates of other customers.

18 In the process of preparing for the rate case, BPA conducted a number of budget  
19 and revenue analyses. Subsequent to offering the Targeted Augmentation Approach in  
20 May, in making one such run, approximately \$20 million per year was found available  
21 for unanticipated purposes. One possible use of these funds was to further augment the  
22 system to commit to making more cost-based power available to the DSIs. This approach  
23 came to be known as the Compromise Approach. BPA explained to the DSIs that it was  
24 unwilling to ask other customers to bear the additional costs to provide this service unless  
25 the DSIs would commit to supporting the Compromise Approach.

1 During these discussions, BPA informed the DSIs that their failure to support the  
2 Compromise Approach would result in BPA going forward with the Targeted  
3 Augmentation Approach, the one under which power would be sold to the DSIs at an  
4 IPTAC rate of 25.0 mills/kWh. In other words, BPA was willing to offer any DSI a  
5 cost-based rate that exerted no upward pressure on other rates regardless of their  
6 perception of the offer. In order to go the extra step of exercising the discretion to  
7 obligate other ratepayers to bear some of the costs of making the rate more attractive,  
8 BPA concluded that some commitment of support from the DSIs was necessary.  
9 Therefore, BPA is proposing an IPTAC rate of 23.5 mills/kWh for DSI that agreed to  
10 support the Compromise Approach. To the extent that there is not a commitment of  
11 support, BPA is not willing to earmark otherwise available funds that could be used for  
12 other purposes.

13 *Q. Are there other reasons?*

14 *A.* Yes. There are obvious pragmatic reasons for requiring this commitment to support the  
15 proposal. First, it did not seem likely that BPA would realistically be able to sustain what  
16 is basically a discretionary policy choice in the absence of a fairly strong show of support  
17 from the most obvious beneficiaries of that choice. Neither did it seem fair to expect  
18 other ratepayers to bear part of the cost of providing this benefit without some signal to  
19 them that it would be an acceptable compromise. Moreover, a commitment to support  
20 the Compromise Approach would have little meaning or value to BPA, the DSIs who  
21 support the proposal, or other ratepayers if the rate for the Compromise Approach were  
22 made available regardless of whether a DSI committed to supporting the proposal or not.

23 The type of support BPA was seeking was described in a letter that BPA sent the  
24 DSIs on June 18, 1999. *See* Attachment A to this testimony. We believe the  
25 commitment of some DSIs to support the Compromise Approach also provided value by  
26 reducing the likelihood of litigation over certain Subscription matters, allowing BPA to

1 make an initial proposal that has a unified base of support, and providing a more accurate  
2 forecast of likely DSI sales. Had all DSIs offered their support, the value would have  
3 been even higher because the costs and the level of uncertainty associated with these  
4 issues would have been even lower. Because of this value, BPA is proposing that the  
5 costs of service to those DSIs who committed to providing that support would be spread  
6 more widely among the other customers than would be the case for DSIs that were  
7 unwilling to do so.

8 As noted earlier, BPA is proposing to make 1,440 aMW available to the DSIs,  
9 990 aMW of that service comprised of power priced at a base rate, combined with  
10 450 aMW priced to reflect directly the cost of BPA purchasing that power. BPA is  
11 proposing that, for those DSIs that supported the Compromise Approach, their  
12 1,210 aMW will have a higher proportion of base power (870 aMW or 72 percent) than  
13 will be the case for 230 aMW made available to the DSIs that did not support the  
14 Compromise Approach (120 aMW or 52 percent). Thus, BPA has its other customers  
15 bearing a higher proportion of the costs for service to the DSIs that offered something of  
16 value to those customers by supporting the Compromise Approach.

17 Offering service at the 25 mills/kWh rate to those that did not support the  
18 proposal reflects the loss of value that BPA had hoped to receive from their support and  
19 is consistent with the signals that BPA sent during the discussions. This price is still  
20 below BPA's market expectations for the FY 2002-2006 period.

21 *Q. Does BPA believe that DSIs not supporting the Compromise Approach can survive at the*  
22 *25 mills/kWh rate?*

23 *A.* As noted above, BPA is not trying to answer the question of whether any specific DSI  
24 can survive at a particular rate. BPA is trying to provide some power at below market  
25 prices to offset poor conditions in the aluminum market and forecasts of high energy  
26 prices, but in such a way that BPA does not require other customer groups to bear an

1 unreasonable degree of risk or costs. Specifically, we don't know the answer to the  
2 question. We assume that these DSIs asked themselves that question when they declined  
3 to endorse the Compromise Approach, because BPA had informed them that the  
4 consequence of a lack of support would be a 25 mills/kWh offer in the initial proposal.

5 *Q. Does this conclude your testimony?*

6 *A. Yes.*



## Department of Energy

Bonneville Power Administration  
P.O. Box 3621  
Portland, Oregon 97208-3621

### POWER BUSINESS LINE

June 18, 1999

In reply refer to: P-6

«Name»

«JobTitle»

«Company»

«Address1»

«City», «State» «PostalCode»

Dear «Salutation»:

On June 2, 1999, Bonneville Power Administration (BPA) met with representatives of its Direct Service Industrial (DSI) customers and described a Compromise Approach (see the enclosure) to post-2001 service to the DSIs that BPA would propose in the Initial Proposal to the upcoming rate case, if BPA had support for it from the DSIs. BPA appreciates the effort of «Company» and the other DSIs to try to resolve this issue in good faith. However, the recent letters BPA received from the DSIs in support of BPA making this proposal varied greatly in their contents. The letters did not address, in a clear and consistent manner, issues that are important to BPA in making this important decision.

This letter is intended to create the clarity necessary for BPA to decide that BPA has the support necessary to move forward with the Compromise Approach proposal in the Rate Case Initial Proposal. Without concurrence by the DSIs on the following issues, BPA will not be able to move forward with that proposal. Instead, the Initial Proposal will have to reflect an earlier proposal (the so-called Targeted Augmentation Approach) BPA placed before the DSIs on April 26, 1999.

BPA needs «Company» to agree to the following:

1. BPA will propose the Compromise Approach in the Initial Proposal for the rate case, and «Company» will support the Compromise Approach throughout the rate case so long as BPA continues to do so. The intent of the average rate and the variable rate in this proposal is to collect \$23.50 per megawatt-hour on average over the rate period, as adjusted pursuant to the Compromise Approach. «Company» may submit evidence on the record during the rate proceeding addressing the reasonableness of the aluminum price forecast, and argue for adjustments as provided for in the Compromise Approach.
2. For as long as BPA is proposing the Compromise Approach in the rate case, «Company» will support the Compromise Approach in the rate case, and will so indicate in discussions outside the rate case venue. «Company» may describe publicly the positions it is taking in the rate case.
3. For as long as BPA is proposing the Compromise Approach in the rate case, «Company» will not oppose in the rate case those elements of the Initial Proposal that relate to the establishment of rates for firm power service to the Investor-Owned Utilities for FY 2002-2006 as provided in BPA's

WP-02-E-BPA-09

Attachment 1

Witnesses: Sydney Berwager, Stephen Oliver, and Harry Clark

Subscription Strategy. BPA will propose in the rate case a procedural method by which «Company» may preserve its ability to litigate within the limitations of this letter.

4. At the end of the rate case, if the Compromise Approach is substantially sustained in BPA's Rate Case Final Record of Decision, «Company» will not legally challenge the Compromise Approach, but «Company» may challenge BPA's decisions regarding adjustments as provided for in the Compromise Approach pursuant to Paragraph 1 above.
5. If the Compromise Approach is substantially sustained in the Rate Case Final Record of Decision, and «Company» desires to purchase power from BPA at the resulting rate, a condition of such sale is that «Company» will not file a lawsuit challenging the sale of power under the Subscription Strategy to serve the residential and small farm loads of the Investor-Owned Utilities, or the rates for such sales, for the FY 2002-2006 period, unless a party representing the interests of the residential and small farm customers of the investor-owned utilities files a lawsuit challenging the power sales or rates for service to the DSIs.
6. With regard to the legal challenge to the Subscription Strategy «Company» has filed in the Ninth Circuit, for as long as BPA is proposing the Compromise Approach in the rate case, «Company» will argue for holding the suit in abeyance. If the Compromise Approach is substantially sustained in the Rate Case Final Record of Decision, including a reasonable aluminum price forecast, «Company» will withdraw the lawsuit challenging the Subscription Strategy, unless a party representing the interests of the residential and small farm customers of the investor-owned utilities continues a lawsuit challenging the Subscription Strategy's provisions regarding service to the DSIs.
7. «Company» need not relinquish its rights to intervene in lawsuits filed by others challenging its benefits.

Please indicate your agreement by signing the concurrence line below and returning the letter to BPA by 5 p.m., PDT on June 18, 1999. You may fax the letter to 503-230-7333.

Sincerely,

Paul E. Norman  
Senior Vice President  
Power Business Line

Enclosure

Concur: \_\_\_\_\_

Name: \_\_\_\_\_  
(Print or type)

Company \_\_\_\_\_

WP-02-E-BPA-09

Attachment 1

Witnesses: Sydney Berwager, Stephen Oliver, and Harry Clark

June 17, 1999

## **COMPROMISE APPROACH**

This is the approach that BPA would propose as part of the Initial Proposal for the upcoming rate case if the DSIs are willing to support it.

**Product:** Firm Power Block (without load following), take-or-pay

**Amount:** 1,500 aMW, approximately 75 percent of FY 1997-2001

**Allocation:** Based on the relative amounts of IP purchases in the FY 1997-2001 time period

**Price:** \$23.50 per MWh (for undelivered, 100 percent annual load factor power)  
\$23.00 per MWh with Conservation and Renewables discount (C&R discount)

### **C&R Discount:**

The Company will be eligible for discount (\$0.50/MWh), subject to the same standards and procedures as utilities participating in the C&R discount program.

### **Flexible IP Index (Variable) Rate Design:**

The following Variable Rate design, applicable to aluminum smelter operations, will be used in the Initial Proposal for the upcoming rate case.

Floor Rate: \$19.00 (\$18.50 w/C&R discount)  
Lower Pivot Point \$0.06 below aluminum price forecast developed in the rate case  
Average Rate: \$23.50 (\$23.00) at aluminum price forecast developed in the rate case for the FY 2002-2006 rate period.  
Upper Pivot Point: \$0.06 above aluminum price forecast developed in the rate case  
Ceiling Rate: \$28.50 (\$28.00)

The variable rate design will use this basic rate design. It will be adjusted (shifted higher or lower along the aluminum price axis) to reflect the aluminum price forecast developed in the rate case. The basis for the rate case aluminum price forecast will be forward price curves and aluminum price forecasts provided to BPA by independent consultants. Forecasted revenues under the Flexible IP Index Rate must be equivalent to or greater than \$23.50 (\$23.00) over the FY 2002-2006 period.

For the Initial Proposal, BPA will use an aluminum price forecast of \$0.68 per pound for the FY 2002-2006 rate period (LME three-month).

At the time a DSI signs its new Power Sales contract, it will have to choose whether to take service under the Variable Rate design or under the standard rate. Each aluminum company's choice will apply to all of its smelting operations.

### **Take-or-Pay/Mitigation:**

These contracts will be take-or-pay arrangements. If the Company reduces load to the extent that it cannot accept deliveries of the amount of power it is obligated to purchase, BPA will remarket the power for the Company. The Company will continue to pay for the contracted amount of power, but BPA will provide a credit to the Company for the amount of energy remarketed. The amount of this credit will be capped at the rate paid under this contract minus any remarketing fee.

The only exception to this take-or-pay obligation is available to DSI's who, at the time they sign a contract, elect to take service under the Variable Rate, and simultaneously elect the Floor Rate Curtailment Take-or-Pay Waiver option. For any company making this dual election, if the company reduces load at the time aluminum prices are

WP-02-E-BPA-09

Attachment 1

Witnesses: Sydney Berwager, Stephen Oliver, and Harry Clark

such that the electric price is at the Floor Rate, the Company will reduce its take-or-pay obligation on BPA. The amount of the take-or-pay reduction will be equal to the pro-rata share of plant load that had been served by BPA just prior to the reduction in plant load. Once having reduced load under this approach, the Company will have given up its contract right to restore service to the curtailed load under the Compromise Approach agreement. The amount of power subject to stranded cost recovery charges (see Stranded Cost, below) will not be reduced by the amount of this take-or-pay reduction.

**Stranded Cost:**

Sales under this arrangement would be subject to the power Cost Recovery Adjustment Clause (CRAC). The CRAC will be added to the Variable Rate and the Average Rate. With regard to other stranded cost mechanisms, the power sales contract will be explicit that, for as long as the Company continues to purchase cost-based power from BPA, the new contract supercedes existing contracts and the Company will be subject to same exposure as BPA's utility customers purchasing subscription power.

**Dividend:**

Sales under this Compromise Approach arrangement would be eligible for a share of the potential "dividend" in the same way that Subscription sales to other customers would make those customers eligible for a share of the dividend.

**Amount and Cost Basis:**

- (a) Under this Compromise Approach, 1,500 aMW will be available to the DSI's. 1,500 aMW was selected set because it represents a large portion (approximately three-fourths) of the load placed on BPA during the previous five years at a cost-based.
- (b) Of that 1,500 aMW amount, 1,000 aMW(?) will be served using a cost-basis approach consistent with the IP-PF relationship of 7(c)(2) of the Pacific Northwest Power Act. BPA expects to serve 200 aMW out of its critical inventory. An additional 800 aMW (an amount equal to approximately 40 percent of the amount of secondary energy BPA expects to have in an average year during this period) will also be made available. (BPA is not committing to serve DSI loads with secondary energy; instead, BPA intends to augment its firm inventory as appropriate to serve this load without decreasing the amount of secondary energy available for sale at market prices.) The cost basis for this component of DSI service will change, up or down, as BPA's overall costs change, but it will not change as a result of rate design changes.
- (c) The price for the 1500 aMW of service will be established by combining the 1,000 aMW(?) described in (b), with additional energy purchased on behalf of the DSI's with the costs of these purchases, as determined in the rate case, passed directly through to the DSI's. This calculated price will be the basis of all Subscription offers to the DSI's. The amounts shown with a "?" will be adjusted in preparing the Initial Proposal so that the price for the 1,500 aMW is \$23.50 per MWh.

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WP-02-E-BPA-09

Attachment 1

Witnesses: Sydney Berwager, Stephen Oliver, and Harry Clark